STAT

STAT

STAT

[ ] Page Printer

The [ ] printer is a high-speed, electronically-controlled page printer capable of printing 72-character lines of letters, numerals and symbols at rates up to nine lines per second. Information can be fed into the printer memory from perforated tape, digital magnetic tape or other sources of digital information. The printer consists of:

1. Reader, buffer-storage
   a) 903 reader cabinet
   b) Control and amplifier cabinet
   c) Buffer-storage with electronics cabinet (These are contained in 3 cabinets joined together and each cabinet is 25" x 27" x 67") - Total weight, 800 lbs.
2. Printer with 72-core storage

   1 cabinet - 6' x 5' x 3' - total weight 1800 lbs.

It operates on 115 volts, 60 cycles per second, drawing 3,000 watts.

STAT

The [ ] page printer is designed according to the following specifications:

I. Input

a) The printer accepts the following inputs:

1. Five-baud teletype code on five wires, all five bauds being provided coincidentally as well as a clock pulse provided on a sixth wire.
2. The teletype input levels required are +10 to -23 volts and the timings input required is -12 to +13 volts.
3. These inputs are in addition to other sources of digital information.

b) Five-unit code punched paper tape (tape reader included with printer).

c) Character Repetition Rate

1. The character repetition rate at the input must be constant and cannot be changed during the course of a message to facilitate the operation of the printer.

II. Characters

a) Characters consist of standard 32 upper and 32 lower case teletype information. The 32 lower case symbols consist of the alphabet in capitals, blank, carriage return, line feed, space, letter shift and figure shift. The 32 upper case symbols consist of the numbers 0-9, miscellaneous standard punctuation, blank, bell, carriage return, line feed, letter shift and figure shift.

b) Upon receiving a line-feed symbol the printer will perform the carriage-return function as well as line-feed and shift to (or remain in) lower case.

III. Message Format

a) The format is controlled exclusively by the carriage return, line feed and space symbols.

b) There are a maximum of 72 characters per line, but considerably shorter line lengths are possible at no reduction in character repetition rate.

c) Automatic line feed and carriage return is provided after the buffer is filled (after 72 characters).

IV. Paper and Ribbon

a) Fan-fold printing paper is used.

1. Obtainable in 5,000 sheets lot

Substance 10, white ADROL paper

Paper size - 11 inches

One original and 2 carbons

$150 for 5,000 sheets from Moore Business Forms,

Niagara Falls, New York

b) Ribbon

1. Heavy duty silk ribbon at $22.00 per roll

60 yards x 1½" wide on 2" ID spool with triple

extra light inking. Obtainable from:
Quest Manufacturing Company
220 West Monroe Street
Chicago 6, Illinois

V. Additional Information

Speed of Operation

The [redacted] printer uses a reflexing double memory system, where one memory is being loaded while the contents of the second memory are printed out. STAT

The time required to print out the contents of any memory is independent of the number of characters per line, and is 95 milliseconds. Paper feed time is approximately 15 ms. The sum of these periods, 110 milliseconds per line or 9 lines per second is maximum printing rate when not input limited. During the printing interval of 110 ms the second memory can be loaded with the following number of characters:

a) At 160 characters/second, 17 characters.

b) At 200 characters/second, 22 characters.

c) At 300 characters/second, (paper tape), 33 characters.

If the number of characters/line is equal to or less than the number of characters shown in the above tabulation, the maximum rate of about 9 lines/second can be realized. The printing rate decreases as the number of characters per line is increased, and approaches the following lower limit for a 72 character line.

a) At 160 character/second, 2.23 lines/second.

b) At 200 character/second, 2.77 lines/second

c) At 300 characters/second, 4.17 lines/second.

Accommodation of Short Lines

There are a maximum number of 72 characters per line, but considerably shorter line length is possible at no reduction in character repetition rate.

Buffering of the printer is accomplished by a slack loop of magnetic tape. The teletype signal is recorded on magnetic tape moving at 4 inches/second, providing a pulse density of 40 and 50 ppi for character repetition of rates of 160 and 200 pps, respectively. The stored information is read out upon demand, when either memory becomes available for loading. Readout into the printer memories will be accomplished at an accellerated rate. Less than 6 inches of slack tape will give sufficient buffering for 25 consecutive 5 character lines.

Physical Characteristics

Items 1, 2 and 3 of figure 1 are housed in one cabinet equal in size to a double relay rack. The printer itself (item 4) contains both memories, their associated driving circuits, as well as all printing logic.

Reliability

The memory and its switching access circuitry consists essentially of silid state components working at a fraction of their rating. Typical numbers of major components in the printer:

1) 1700 Magnistors
2) 850 diodes working as R.F. voltage detectors, RF voltage is 8 volts, (less than 10o/o of rating).
3) 500 Transistors.
4) 150 computer type vacuum tubes.
5) 72 Thyratrons (For print hammers).